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NOTICE OF ALLOWANCE AND FEE(S) DUE

7590

07/19/2008

Philips Intellectual Property & Standards
595 Miner Road
Cleveland, OH 44143

EXAMINER

HO, ALLEN C

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 07/10/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/534,159

05/05/2005

Jens-Peter Schlotka

PHDE020257US

9967

TITLE OF INVENTION: COMPUTED TOMOGRAPHY DEVICE AND METHOD WITH THREE-DIMENSIONAL BACKPROJECTION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	10/10/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
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P.O. Box 1450
Alexandria, Virginia 22313-1450
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

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Philips Intellectual Property & Standards
 595 Miner Road
 Cleveland, OH 44143

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,159	05/05/2005	Jens-Peter Schlomka	PHIDE020257US	9667

TITLE OF INVENTION: COMPUTED TOMOGRAPHY DEVICE AND METHOD WITH THREE-DIMENSIONAL BACKPROJECTION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$300	\$0	\$1740	10/10/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
HQ, ALLEN C	2882	378-006000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB-122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB-47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2
 3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____
 Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,159	05/05/2005	Jens-Peter Schlomka	PHDE020257US	9967
7590 07/10/2008			EXAMINER	
Philips Intellectual Property & Standards 595 Miner Road Cleveland, OH 44143			HO, ALLEN C.	
			ART UNIT	PAPER NUMBER

2882

DATE MAILED: 07/10/2008

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 124 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 124 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability**Application No.**

10/534,159

Examiner

Allen C. Ho

Applicant(s)

SCHLOMKA ET AL.

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 13 June 2008.
2. ☒ The allowed claim(s) is/are 1,2,4-7,9-14 and 16-19.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 20050505
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Allowable Subject Matter

1. Claims 1, 2, 4-7, 9-14, and 16-19 are allowed.
2. The following is an examiner's statement of reasons for allowance:

With respect to claims 1, 2, 4, 5, and 9-11, the prior art discloses a computed tomography method that comprises the steps of: a) generating, using a radiation source and a diaphragm arrangement which is arranged between an examination zone and the radiation source, a fan beam which traverses the examination zone and an object present therein; b) generating relative motions, comprising a rotation of the radiation source about an axis of rotation and the object; c) acquiring measuring values which are dependent on the intensity of the radiation by means of a detector unit which detects, during the relative motions, the primary radiation from the fan beam and radiation which is coherently scattered in the examination zone or on the object; and d) reconstructing a CT image of the examination zone from the measuring values, during which a back projection is carried out in a volume which is defined by two linearly independent vectors of a rotational plane and a wave vector transfer. However, the prior art did not disclose or fairly suggest multiplying the measuring values by a first weighting factor and a second weighting factor as claimed.

With respect to claim 6, the prior art discloses a computer tomography that comprises: a radiation source; a diaphragm arrangement which is arranged between an examination zone and the radiation source in order to generate a fan beam which traverses the examination zone; a detector unit which is coupled to the radiation zone and comprises a measuring surface; a drive

arrangement for displacing an object present in the examination zone with respect to the radiation source along an axis of rotation and/or parallel to the axis of rotation; a reconstruction unit for reconstructing the distribution of the scatter intensity within the examination zone from measuring values acquired by the detector unit. However, the prior art did not disclose or fairly suggest a control unit for controlling the radiation source, the detector unit, the drive arrangement, and the reconstruction unit in conformity with the steps a) to d) of claim 1 as claimed.

With respect to claim 7, the prior art discloses a computer readable medium containing instructions for controlling a control unit for controlling a radiation source, a diaphragm arrangement, a detector unit, a drive arrangement, and a reconstruction unit of a computer tomograph so as to carry out a method comprising: a) a) generating, using a radiation source and a diaphragm arrangement which is arranged between an examination zone and the radiation source, a fan beam which traverses the examination zone; b) rotating the radiation source about the examination zone; c) acquiring measuring values which are dependent on the intensity of the radiation by means of the detector unit which detects, during the rotation of the source, the primary radiation from the fan beam and radiation which is coherently scattered in the examination zone or on the object; and reconstructing a CT image of the examination zone from the measuring values, during reconstruction a back projection is carried out in a volume which is defined by two linearly independent vectors of the rotational plane and a wave vector transfer. However, the prior art did not disclose or fairly suggest step d) as claimed.

With respect to claims 12-14, the prior art discloses a computed tomography method that comprises: a) generating, using a radiation source and a diaphragm arrangement which is

arranged between an examination zone and the radiation source, a fan beam which traverses the examination zone; b) generating a relative motion, comprising a rotation about an axis of rotation of the radiation source about the examination zone and an object disposed therein; c) acquiring measuring values which are dependent on the intensity of the radiation by means of a detector unit which detects, during the relative motion, the primary radiation from the fan beam and radiation which is coherently scattered in the examination zone; and reconstructing a CT image of the examination zone from the measuring values, during which a back projection is carried out in a volume which is defined by two linearly independent vectors of a rotational plane and a wave vector transfer, wherein the back projection is performed in the volume along rays having a curved shape. However, the prior art did not disclose or fairly suggest multiplying the measuring values by a first weighting factor and a second weighting factor as claimed.

With respect to claims 16-19, the prior art disclose a computed tomography system that comprises: a detector that detects primary and scattered radiation traversing an examination zone; and a reconstructor that reconstructs measuring values indicative of the detected radiation, wherein the reconstructor back projects the measuring values in a volume as a function of a wave vector transfer that varies between a scatter center and a foot of the detector. However, the prior art did not disclose or fairly suggest prior to the back projection the measuring values are multiplied by a first weighting factor and a second weighting factor as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Amendment

3. Applicants' amendments filed 13 June 2008 with respect to claims 1, 6, 7, 9-11, and 16-19 have been fully considered and are persuasive. The rejection of claims 1, 6, 7, 9-11, and 16-19 under 35 U.S.C. 103(a) as being unpatentable over Harding *et al.* (U. S. Pub. No. 2002/0150202 A1) in view of Schneider *et al.* (Medical Imaging 2001) has been withdrawn.
4. Applicants' amendments filed 13 June 2008 with respect to claims 2 and 5 have been fully considered and are persuasive. The rejection of claims 2 and 5 under 35 U.S.C. 103(a) as being unpatentable over Harding *et al.* (U. S. Pub. No. 2002/0150202 A1) and Schneider *et al.* (Medical Imaging 2001) as applied to claim 1 above, and further in view of Proska *et al.* (U. S. Patent No. 6,285,733 B1) has been withdrawn.
5. Applicants' amendments filed 13 June 2008 with respect to claims 12-14 have been fully considered and are persuasive. The rejection of claims 12-14 under 35 U.S.C. 103(a) as being unpatentable over Harding *et al.* (U. S. Pub. No. 2002/0150202 A1) in view of Schneider *et al.* (Medical Imaging 2001) and Proska *et al.* (U. S. Patent No. 6,285,733 B1) has been withdrawn.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen C. Ho whose telephone number is (571) 272-2491. The examiner can normally be reached on Monday - Friday from 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Allen C. Ho/
Primary Examiner
Art Unit 2882

24 June 2008